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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/551,284	07/27/2006	Dieter Funk	021500-142	1559

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EXAMINER

SZEWczyk, CYNTHIA

ART UNIT	PAPER NUMBER
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1791

NOTIFICATION DATE	DELIVERY MODE
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05/29/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/551,284	Applicant(s) FUNK ET AL.	
	Examiner CYNTHIA SZEWCZYK	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 March 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) 8-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 15-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 March 2009 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over YOSHIZAWA et al. (EP 0393759) in view of VANASCHEN et al. (US 4,738,704).

YOSHIZAWA teaches a method of heating glass sheets for laminated glass. YOSHIZAWA teaches that the glass sheets may be asymmetrical (p. 2, lines 13-17). YOSHIZAWA teaches that the glass sheets are preheated and press-bent (p. 2, lines 19) and finally cooled in a Lehr (p. 3, line 46). YOSHIZAWA discloses that the temperature of the glass sheets is equal after the preheating (p. 2, lines 30-33). It would have been obvious to one of ordinary skill in the art that after the glass sheets are finished and stored in a room of uniform ambient temperature, the glass sheets would be at the same temperature. YOSHIZAWA is silent to keeping the glass sheets at the same temperature immediately after pressing.

VANASCHEN teaches a method for bending laminated glass sheets. VANASCHEN discloses that it is imperative that glass sheets be at the same temperature after pressing because the smallest difference in cooling conditions between the two sheets will lead to deformations which make that laminated glass sheets unusable (col. 1, lines 58-62). Therefore, it would have been obvious to one of ordinary skill in the art to adapt the apparatus of YOSHIZAWA to control the heating of the glass sheets to keep the temperature of the glass sheets equal after pressing.

Regarding claim 3, YOSHIZAWA discloses that the temperature of the glass sheets at the end of the preheating is used as the control parameter (p. 4, lines 10-15).

3. Claims 2, 4, and 15- 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over YOSHIZAWA et al. (EP 0393759) in view of VANASCHEN et al. (US 4,738,704) as applied to claims 1 and 3 above, and further in view of INOUE et al. (US 2004/0079112 A1).

YOSHIZAWA as modified by VANASCHEN teaches a method of heating glass sheets for laminated glass. Modified YOSHIZAWA discloses that the temperature of the glass sheets at the end of the preheating is used as the control parameter (p. 4, lines 10-15). Modified YOSHIZAWA is silent as to detecting the temperature after pressing.

INOUE teaches a method of bending a glass sheet. INOUE discloses that an objective of the invention is to provide a glass sheet for automobile windows (para. 0002) without a wrinkle or optical distortion (para. 0008). INOUE discloses that this is accomplished by controlling the bending temperature and bending time period (para. 0009). Modified YOSHIZAWA discloses that the glass is intended to be used as automobile windows as well (p. 2, lines 3-5) and would therefore be designed to produce glass without a wrinkle or optical distortion as well. Therefore, it would have been obvious that the bending temperature and bending time period would have been controlled in modified YOSHIZAWA as well. It would have been obvious to one of ordinary skill in the art that controlling bending temperature and bending time period

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would require measuring the temperature of the glass throughout the bending process, which would include the starting and final bending temperatures.

Regarding claim 4, figure 1a of INOUE shows the relation between glass bending time at different viscosities. Figure 1a shows that a higher viscosity requires a longer bending time, therefore, a glass at a higher temperature would require a longer bending time.

Regarding claim 15, see the discussion of claim 2.

Regarding claim 16, since VANASCHEN stresses the importance of having the glass sheets at the same temperature after press-bending (col. 1, lines 58-62), it is implied that a temperature detector would be present at the exit of the press-bending station in order to check if the glass sheets are at the same temperature.

Regarding claim 17, see the discussion of claim 2.

4. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over YOSHIZAWA et al. (EP 0393759) in view of VANASCHEN et al. (US 4,738,704) as applied to claims 1 and 3 above, and further in view of HERRINGTON et al. (US 4,952,227).

YOSHIZAWA as modified by VANASCHEN teaches a method of heating glass sheets for laminated glass. Modified YOSHIZAWA is silent as to the use of an intermediate cooling air.

HERRINGTON teaches a method of bending glass sheets wherein the apparatus is controlled to adjust operating parameters based on properties of the glass sheet

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running through similar to the process of modified YOSHIZAWA. HERRINGTON teaches that it is necessary to provide cooling air to the preheating area to prevent the glass from over heating (col. 7, lines 3-18). It would have been obvious to one of ordinary skill to provide cooling air to the preheater of modified YOSHIZAWA because modified YOSHIZAWA discloses that it is necessary to control the temperature of the glass so that it does not overheat to the extent that deformation control would be lost (col. 5, lines 46-51).

5. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over YOSHIZAWA et al. (EP 0393759) in view of VANASCHEN et al. (US 4,738,704) and HERRINGTON et al. (US 4,952,227) as applied to claims 1, 3, 5, and 6 above, and further in view of BAMFORD et al. (US 4,043,782).

YOSHIZAWA as modified by VANASCHEN and HERRINGTON teaches a method of heating glass sheets for laminated glass wherein air cooling is used as an intermediate cooling to avoid overheating of the glass. Modified YOSHIZAWA is silent as to the blowing pressure of the air.

BAMFORD teaches a method of bending thin glass sheets for automobile windows. BAMFORD discloses that the glass undergoes tempering with air blowing under low pressure (col. 7, lines 35-40). BAMFORD discloses that the glass undergoes a first tempering at high air pressure and a second tempering at a lower air pressure of about 1 to 3 psi (col. 9, lines 1-4) or about 69 to 206 mbar. It would have been obvious

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to one of ordinary skill in the art to set the air blowers of modified YOSHIZAWA to a blowing pressure below this range because it would avoid tempering the glass too early.

Response to Arguments

6. Applicant's arguments with respect to claims 1-7 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CYNTHIA SZEWCZYK whose telephone number is (571)270-5130. The examiner can normally be reached on Monday through Thursday 7:30 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on (571) 272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ Carlos Lopez/
Primary Examiner, Art Unit 1791
CS